

Department of Environmental Quality  
Remediation Division  
General Information

Upper Blackfoot Mining Complex



Site Response Section

**Update**

January 2013

**Description and History**

The Upper Blackfoot Mining Complex (UBMC) is located 15 miles east of Lincoln. The UBMC sits in the headwaters area of the upper Blackfoot River and covers approximately 6 square miles. This area was mined intermittently from 1889 to the 1950s and explored intermittently up to the present. Tailings, waste rock dumps, and acid mine drainage containing elevated levels of metals were disposed of directly onto the ground surface or into surface water resulting in the contamination of surface water, sediments, soils and groundwater. In 1975, a tailings impoundment failed during heavy rains and washed metal-laden tailings down the drainage into the upper Blackfoot River.

The UBMC includes both federally-owned lands (National Forest System) and private lands (historic Asarco Patented Mining Claims, Asarco Fee lands and other private property). The mining area is located in a fairly remote location, which is used by hunters and other recreationists. One residence with a domestic well is located above the tailings impoundment. Human health and environmental issues exist that are related to elevated levels of heavy metals present in mine waste piles, tailings, acidic metal-bearing surface water, groundwater, sediments, water discharging from mine adits, and contaminated waste redeposited as stream sediments. The UBMC Facility is a high priority CECRA (state superfund) site.

**Mike Horse Creek Seepage Below the Dam (2007)**

From the late-1990's to 2005, Asarco conducted interim cleanups to meet temporary water quality standards. In 2003, DEQ initiated litigation against Asarco and Atlantic Richfield Company (Arco) for cleanup and payment of DEQ's costs. Asarco filed for bankruptcy in 2005, and in 2008 the State of Montana and the federal government reached an agreement with Asarco and Arco to address the environmental obligations. As part of the agreement, Asarco constructed a water treatment plant to treat contaminated water before it discharges to the upper reaches of the Blackfoot River. In addition, the State entered into an agreement with the U.S. Forest Service to implement the





cleanup on federal land which was identified in an Engineering Evaluation/Cost Analysis (EE/CA). Finally, all of Asarco's real property at the UBMC was transferred to the Montana Environmental Trust Group.

### **Recent Activities Through 2012**

In 2009, DEQ initiated the construction design process for the removal of the Mike Horse Dam and tailings impoundment, and repository design. During the design-level investigation, technical issues were identified regarding the suitability of the EE/CA-identified repository location, which led to the investigation of other alternatives. In 2011, DEQ contracted with an engineering firm to review the previous repository investigations for the UBMC, conduct an independent repository identification effort, and provide a technical screening evaluation of potential suitable repository sites.

In 2011, DEQ and the Montana Environmental Trust Group made improvements to the water treatment plant so that water quality standards could be met. In addition, efficiency was improved through design and operational modifications.

In 2012, the US Forest Service selected Section 35 as the repository location for the mine waste that will be removed from portions of its property identified for cleanup. Section 35 has undergone design level investigations to collect data that is crucial to designing a protective repository. DEQ completed the investigations in November 2012 and is working with its contractor this winter to develop final designs for the repository.

### **Future Activities**

DEQ plans to begin construction of the repository in 2013, with removal of the dam and impoundment beginning in 2014. For non-Forest Service property, DEQ is completing human health and ecological risk assessments that will evaluate risks associated with the UBMC and develop site-specific cleanup levels; both assessments will be complete in the spring of 2013. DEQ is also preparing a feasibility study to evaluate potential cleanup alternatives for the private lands, which will be completed early this fall. DEQ will then prepare a proposed plan, solicit public comment on the plan, and issue a record of decision outlining the chosen remedy for the non-Forest Service property. DEQ anticipates that cleanup may occur in 2014.

<p>If you have questions, please contact: David Bowers DEQ - Remediation Division P.O. Box 200901 Helena, MT 59620-0901 <a href="mailto:dbowers@mt.gov">dbowers@mt.gov</a> 406-841-5063</p>	<p><b>More Information about the Facility can be found at:</b> Montana Department of Environmental Quality 1100 North Last Chance Gulch Helena, MT 59601 Monday – Friday: 8 a.m – 5 p.m. <a href="http://deq.mt.gov/StateSuperfund/UBMC/default.mcp">http://deq.mt.gov/StateSuperfund/UBMC/default.mcp</a>x</p>
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**Department of Environmental Quality  
Remediation Division  
General Facility Information**

**Texaco Sunburst Works Refinery**



**Site Response Section**

**Update**

January 2013

**Description and History**

The Texaco Sunburst Works Refinery (Facility), on the southern and western edges of Sunburst, Montana, is an inactive 380-acre oil refinery operated by Texaco from 1924 until 1961. Although Texaco primarily operated this Facility, Chevron Environmental Management Company (CEMC) is currently the sole Liable Party for the Facility following a merger with Texaco in the early 2000's. The refinery primarily produced leaded gasoline of various grades. Polynuclear aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), metals (mostly lead), free product, and petroleum hydrocarbons are present in the soil and groundwater at the Facility. A Voluntary Cleanup Plan completed at the site in 2003 resulted in the excavation of some petroleum and metals contaminated soils and placement in three on-site repositories. The Facility is currently in the remedial investigation and risk assessment phase. DEQ has not yet issued a Record of Decision for the Facility.



**1953 Aerial Photo of the TSWR Facility**



**Residential yard excavation to remove lead impacted soils, 2012**



## Recent Activities Through 2012

The major focus over the past 3 years for this Facility has been an extensive and large scale Phase II Remedial Investigation, the goals of which are to locate all remaining contamination from the refinery in soils, groundwater, surface water, sediments, and air, and to understand the contaminant fate and transport mechanisms at the Facility. During the course of the Phase II Remedial Investigation, more than 4,500 environmental samples were collected and analyzed at laboratories. Additionally, more than 16,000 field screening measurements were collected and recorded with environmental screening equipment. This field work is complete and DEQ is currently reviewing the Phase II Remedial Investigation report.

Throughout the remedial investigation process, DEQ has required that CEMC conduct targeted remediation in instances where recently discovered contamination poses a risk to public health or the environment. These interim actions have included the installation of a soil vapor intrusion mitigation system at one residence to prevent contaminated soil vapors from entering the indoor air, the removal and replacement of lead contaminated soils from five residential properties in the town of Sunburst, ongoing petroleum recovery from groundwater (over 900 gallons recovered to date), and the fencing of a surface water seep where contaminated groundwater was found to be discharging to the ground surface.

## Future Activities

DEQ expects the Phase II Remedial Investigation report will be approved by DEQ prior to June 2013. Chevron is currently preparing risk assessment work plans for both ecological and human health risk assessments at the Facility. DEQ expects that these work plans and subsequent reports will be approved in 2013. DEQ expects that field work associated with a revised Feasibility Study for the Facility will begin in 2013 and will be completed in 2014. DEQ will then issue a proposed plan for final cleanup of the Facility, and following public comment on that document, will issue a final Record of Decision for the Facility. DEQ expects that this Record of Decision will be issued in 2014/2015.

<p>If you have questions, please contact:</p> <p>Chris Cote DEQ - Remediation Division P.O. Box 200901 Helena, MT 59620-0901 <a href="mailto:ccote2@mt.gov">ccote2@mt.gov</a> 406-841-5078</p>	<p><b>More Information about the Facility can be found at:</b></p> <p>Montana Department of Environmental Quality 1100 North Last Chance Gulch Helena, MT 59601 Monday – Friday: 8 a.m – 5 p.m. <a href="http://deq.mt.gov/StateSuperfund/sunburst.mcpx">http://deq.mt.gov/StateSuperfund/sunburst.mcpx</a></p>
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**Department of Environmental Quality  
Remediation Division  
General Information**

## KRY Site



### Site Response Section

# Update

January 2013

### Description and History

The KRY Site is approximately 75 acres in size and is located in the Evergreen area of Kalispell. The KRY Site is the name applied to collectively refer to three state superfund facilities with commingled contamination: Kalispell Pole & Timber (KPT), Reliance Refining Company (Reliance), and Yale Oil Corporation (Yale Oil), which were formerly used for wood treating (mixture of diesel fuel and pentachlorophenol (PCP), including dioxins), petroleum refining, petroleum bulk storage, and railroad operations. The KRY Site is adjacent to the Stillwater River and includes a residential area as well as active business operations (wood products manufacturing, stone-cutting for construction/landscaping, and an office supplies store).

Groundwater is encountered at approximately 20 feet below ground surface. Residential and public water supply wells that supply drinking water and commercial wells that could supply drinking water are located adjacent to and within the KRY Site. Groundwater is contaminated with pentachlorophenol (PCP) and polycyclic aromatic hydrocarbons (PAHs), dioxins/furans, volatile organic compounds (VOCs), petroleum hydrocarbons, and metals. Free-product is floating on the groundwater on both the western and eastern portions of the KRY Site. Surface and subsurface soils are contaminated with PCP and PAHs, dioxins/furans, VOCs, petroleum hydrocarbons, and metals. Sludge is also present on the eastern portion of the KRY Site and an isolated area of buried sawdust exists on the western portion of the KRY Site.

9/22/12 Photo-- BNSF's contractor finishing installation of high density polyethylene liner in western cell of land treatment unit.

### Litigation

In 2004, DEQ filed a lawsuit for reimbursement of its oversight costs and a court order requiring the defendants to conduct the necessary cleanup. By 2008, DEQ had settled the lawsuit with all parties except BNSF. DEQ won summary judgment against BNSF Railway (BNSF) for the KPT Facility. In March 2008,

DEQ and BNSF went to trial over its liability at Reliance. The judge found BNSF fully liable for the Reliance facility. There was an appeal to the Montana Supreme Court and a decision in December 2010 confirmed BNSF fully liable. Consent decrees between DEQ and DNRC and Swank Enterprises





(separately), as well as court orders, require that DNRC reimburse 27.5% and Swank 2% of all remedial action costs incurred in cleaning up the KRY Site, including DEQ's oversight costs and costs incurred by BNSF for remediation of the KRY Site to the extent those costs are deemed allowable by DEQ. Additionally, the Court order requires DEQ to review BNSF's costs and determine what is allowed. BNSF sued DEQ over the Record of Decision (ROD) and in December 2011 the Court ruled in DEQ's favor, finding that the ROD was issued in compliance with Montana law and that BNSF was required to implement it. With the Court's affirmation of DEQ's remedy selection in the ROD, BNSF is required to implement the cleanup selected in the ROD under the oversight of DEQ.

### **Recent Activities**

DEQ issued its ROD for final cleanup in 2008. In November 2010, BNSF stabilized and excavated lead-contaminated soils and shipped them offsite in railcars for disposal at a facility in North Dakota. In the fall/winter of 2011 and continuing through the summer of 2012, BNSF used chemical oxidation to break down the PCP and dioxin in the groundwater. Both injections and deep soil blending (at the water table) were conducted on the western portion of the site. Between May 2012 and November 2012, BNSF demolished buildings, erected fences to control access, excavated the majority of the PCP and dioxin-contaminated soils, constructed lined stockpile/staging areas for contaminated soils/rocks, constructed the lined PCP land treatment unit (LTU), removed wood waste and other construction debris, and began screening rocks from contaminated soils to load into the LTU.

### **Future Activities**

Cleanup activities are anticipated to continue through 2013, with substantial additional excavation of contaminated soils and sludge on the eastern portion of the KRY Site. Continued screening of contaminated soil to remove rocks and loading of the LTU on the western portion of the KRY Site will occur, followed by treatment of soil in the LTU for up to 20 years. Ongoing chemical oxidation work will also be necessary throughout the KRY Site to address the entire groundwater plume.

### **Expenditures**

BNSF has submitted approximately \$7.7 million in invoices covering the timeframe of July 2009 through July 2012 for its environmental/engineering consultants, construction contractor, and laboratory expenses. DNRC's share of these costs is approximately \$2.1 million; DNRC applied its \$1.25 million credit and its share for future costs will come from the orphan share fund. DEQ has incurred approximately \$1.5 million in costs since July 2009, which includes costs associated with labor, overhead, laboratory, DEQ's consultant, and interest on outstanding balances. These costs must be reimbursed by the liable parties. DNRC's share of DEQ's costs since July 2009 is approximately \$413,000.

If you have questions, please contact:

Moriah Bucy  
DEQ - Remediation Division  
P.O. Box 200901  
Helena, MT 59620-0901  
[mbucy@mt.gov](mailto:mbucy@mt.gov)  
406-841-5064

**More Information about the KRY Site can be found at:**

Montana Department of Environmental Quality  
1100 North Last Chance Gulch  
Helena, MT 59601  
Monday – Friday: 8 a.m – 5 p.m.  
<http://deq.mt.gov/StateSuperfund/kpt.mcpix>



**Department of Environmental Quality  
Remediation Division  
DP4003 – Orphan Share Claims Feasibility Studies**

**Joslyn Street Tailings**



**Site Response Section**

**Update**

January 2013

**Description and History**

The Joslyn Street Tailings Facility (Facility) is located in the northwest part of Helena surrounding the BNSF Railway Company (BNSF) railroad tracks near Joslyn and Brady Streets. A metal ore mill operated at this location from approximately 1935 to 1938. Tailings containing elevated levels of metals and metalloids, including arsenic and lead, were disposed of directly onto the ground surface resulting in contamination of on-site soils and groundwater. In addition, railroad operations may have contributed to contamination at the Facility.

The Facility is approximately 145 acres in size. Land use includes railroad right-of-way, baseball fields, abandoned rail lines, a tailings repository, horse pasture, private residences, and a warehouse. Groundwater is shallow (approximately five to eight feet below ground surface) and is used by nearby residents for drinking water and irrigation.

**1994 Aerial Photo of the Joslyn Street Tailings Facility**

A 1995 voluntary cleanup plan (VCP) by BNSF proposed on-site disposal of the tailings in a lined repository. This was the first VCP to be submitted under the new voluntary cleanup program. BNSF proposed an amendment to the VCP in May 1997. The amendment addressed a revegetation and domestic well monitoring access issue.





## Recent Activities Through 2012

In April 2003, previously unidentified soil contamination within the immediate vicinity of the former Green Meadow golf course well was discovered. Elevated levels of arsenic and lead were detected in surface and subsurface soils. Based on this information as well as uncontrolled access to portions of the Facility with impacted surface soil, DEQ re-ranked the Facility to a high priority in September 2004.

In July 2005, DEQ required BNSF and the other liable persons to conduct a supplemental investigation to determine the extent and magnitude of soil and groundwater contamination at the Facility. In addition to the supplemental investigations, BNSF is conducting long-term operation and maintenance of the tailings repository including semi-annual weed control; fence maintenance; revegetation; groundwater monitoring; and maintaining deed restrictions.

In November 2005, BNSF petitioned for allocation under the Controlled Allocation of Liability Act (CALA). As required by CALA, DEQ conducted a good faith investigation to identify potentially liable persons and, in September 2009, DEQ issued notice letters to BNSF, Montana Rail Link, Inc. (MRL), Lewis and Clark County, Walter Crane, Crystal Crane, Judy Reynolds, and Lee Reynolds. In December 2012, BNSF and MRL signed a Stipulated Agreement allocating liability for the Facility. As required by CALA, DEQ has provided that Stipulated Agreement to the other liable parties at the Facility and offered them the opportunity to sign the agreement. DEQ has not yet approved the agreement but anticipates doing so in January 2013.

## Future Activities

BNSF has submitted a Risk Assessment Work Plan to begin evaluating risks associated with the Facility and to develop site-specific cleanup levels. Once the Risk Assessment is complete, BNSF will prepare a Feasibility Study Work Plan and a Feasibility Study to evaluate potential cleanup alternatives. DEQ will then prepare a Proposed Plan, solicit public comment on the Plan, and issue a Record of Decision outlining the chosen remedy. DEQ anticipates that cleanup may occur in 2014.

<p>If you have questions, please contact:</p> <p>Aimee Reynolds DEQ - Remediation Division P.O. Box 200901 Helena, MT 59620-0901 <a href="mailto:areynolds@mt.gov">areynolds@mt.gov</a> 406-841-5065</p>	<p><b>More Information about the Facility can be found at:</b></p> <p>Montana Department of Environmental Quality 1100 North Last Chance Gulch Helena, MT 59601 Monday – Friday: 8 a.m – 5 p.m. <a href="http://deq.mt.gov/StateSuperfund/index.asp">http://deq.mt.gov/StateSuperfund/index.asp</a></p>
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Department of Environmental Quality  
Remediation Division  
DP4003 – Orphan Share Claims Feasibility Studies

## S&W Sawmill Facility



Montana Department of  
**ENVIRONMENTAL QUALITY**

Site Response Section

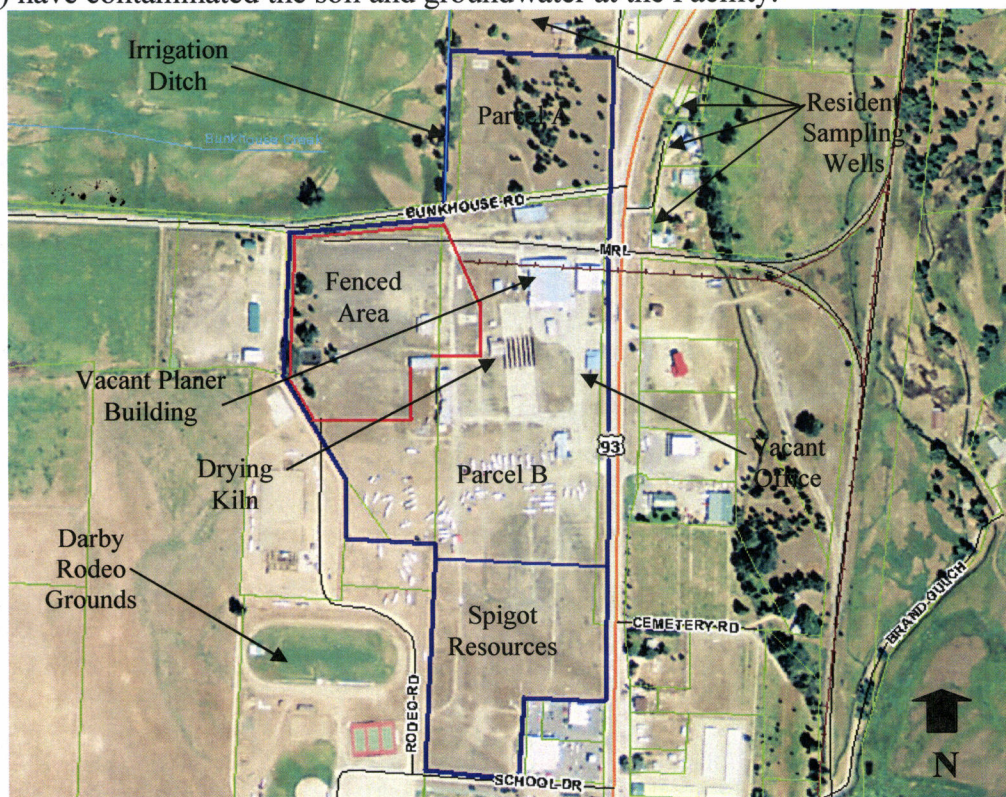
# Update

December 2012

### Description and History

The S&W Sawmill Facility, located approximately 1/2 mile north of the City of Darby at the intersection of US Highway 93 and Bunkhouse Road, is shown on the map below. The S&W Sawmill Facility is being addressed by the Montana Department of Environmental Quality (DEQ) under the authority of the state Superfund law, CECRA. International Paper (IP) is designated as the lead liable party for remediation, or cleanup, of the Facility. Most of the Facility is currently not in use. From approximately 1961 to 1998, portions of the Facility operated as a sawmill. From approximately 1961 to 1978, portions of the Facility also operated as a wood treatment plant that used the chemical pentachlorophenol (PCP) mixed with diesel as a wood preservative. The chemical mixture and its by-products (dioxins/furans) have contaminated the soil and groundwater at the Facility.

Aerial Map  
of S&W  
Facility



### Contaminated Areas

The major contaminants of concern are PCP and dioxins/furans. Remedial investigations were completed in November 2004 and confirmed contamination in both the soils and the groundwater. The fenced area of the Facility contains the heaviest contamination of soils, with the groundwater plume stretching from the fenced area to properties across US Highway 93.



## Recent Activities Through 2012

The groundwater plume is evaluated twice a year through the sampling of 28 groundwater monitoring wells. Five of these wells are offsite residential drinking wells. In February 2011, one shallow offsite residential well was removed from service due to elevated detections of dioxins/furans and DEQ required IP to supply the resident with a new residential well.

Currently, ownership of a significant portion of the Facility is in transition because the former owner, Darby Lumber Company, filed for bankruptcy and, as part of this proceeding, abandoned the real property. A third party purchased the mortgage note but has not taken ownership of the real property, which means there is no current owner for a portion of the Facility.

In September 2012, a supplemental investigation was completed by IP. The original investigation was completed in 2004, but based upon new information, DEQ determined that additional investigations were required to further characterize the nature and extent of contamination at the Facility. The supplemental investigation focused on surface soils throughout the Facility and on surrounding residential and commercial properties.

Another data gap filled during this time period was a dioxin/furan investigation of the irrigation ditch running north away from the Facility. High levels of dioxins/furans were discovered in the ditch and sampling was performed between the northern boundary of the Facility (Parcel A) and Moles Lane. In total, approximately 2000 feet of the irrigation ditch was sampled. DEQ approved of IP's report documenting this investigation in October 2012.

## Future Activities

DEQ is currently reviewing the Draft Baseline Risk Assessment (BRA), submitted by IP on October 29, 2012. DEQ anticipates providing IP with comments from this review in January 2013. DEQ also expects that IP will complete the Final BRA by spring 2013. The Final BRA identifies the risks posed by the Facility and also develops site-specific cleanup levels based on protection of human health and the environment.

IP will also be submitting a Fate and Transport Work Plan in December 2012, with the expectation of collecting fate and transport samples at the S&W Facility in early 2013. IP will then submit a report documenting the investigation and developing site-specific cleanup levels based on protection of groundwater at the Facility.

With the expectation that the BRA and Fate and Transport Report will be completed within the first half of 2013, DEQ expects IP to build on these completed tasks and begin developing and evaluating remedial alternatives, to be documented in the Feasibility Study, during the latter part of 2013.

<p>If you have questions, please contact:</p> <p>Robert L. Roll DEQ - Remediation Division P.O. Box 200901 Helena, MT 59620-0901 <a href="mailto:rroll@mt.gov">rroll@mt.gov</a> 406-841-5025</p>	<p><b>More Information about the Facility can be found at:</b></p> <p>Montana Department of Environmental Quality 1100 North Last Chance Gulch Helena, MT 59601 Monday – Friday: 8 a.m – 5 p.m. <a href="http://deq.mt.gov/StateSuperfund/index.asp">http://deq.mt.gov/StateSuperfund/index.asp</a></p>
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**Department of Environmental Quality  
Remediation Division  
DP4005 –Basin Reclamation Bond Expenditure**

**Basin Creek Mine Site**



**Federal Superfund Section**

**Update**

January 2013

**Description and History**

The Basin Creek Mine is located within the Upper Tenmile Creek Mining Area and Basin Mining Area National Priorities List (NPL) Sites approximately 15 miles southwest of Helena. The Basin Creek Mine was an open heap pit leach facility operated by Pegasus Gold Corporation ("Pegasus"). Approximately 3,000,000 tons of ore were mined and 100,000 ounces of gold were produced during its operation. Pegasus declared bankruptcy in 1998 and halted reclamation activities. DEQ obtained the reclamation bond held by Pegasus through a settlement agreement with the surety company. A portion of the original permit area lies on US Forest Service lands. DEQ became owner of the site as part of the bond forfeiture. In 2005, a General Obligation Bond (GO Bond) was issued to continue the reclamation activities. A second GO Bond was issued in 2006 to continue the work.

The Luttrell Repository was built in 1999 by the US Environmental Protection Agency (EPA) for the deposition of mine related waste from the Upper Tenmile and Basin watersheds. There are over 300 abandoned mine sites located in the combined watersheds that impact soil and groundwater. Major contaminants include cyanide, arsenic and lead.

DEQ conducted mine reclamation activities on the Basin Mine site with bond money. A large portion of DEQ's reclamation activities was the consolidation and capping of Leach Pad 1 (LP1). Mine reclamation activities conducted with the Reclamation and GO bonds also constitute remedial action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and are eligible for credit toward Montana's cost share for remedial action at the two NPL sites. Between the matching funds for the GO Bond and Reclamation bond DEQ has more than \$6,200,000 credit towards Montana cost share. Environmental Protection Agency (EPA) is the lead agency conducting the Remedial Design/Remedial Action (RD/RA) at both NPL sites except that the DEQ is the lead for conducting reclamation at the Basin Creek Mine.

Through a building and services lease agreement with EPA, DEQ collects monies from EPA for DEQ's future operations and maintenance of the Luttrell repository.



## 2005 Aerial Photo of the Basin Creek Mine Site

### Recent Activities Through 2012

Contouring of the Luttrell Repository was conducted in 2011 and 2012 in order to optimize the shape of the repository to promote draining. During this period DEQ, EPA, Bureau of Reclamation and US Geological Survey (USGS) met to discuss long-term closure plans for the Basin Mine site. Meetings will continue to discuss cost share, road closures and issues relating to ecological risk mitigation. Current challenges include LP1 water treatment, erosion control, Best Management Practices for storm water, removal of former remediation and mine equipment and maintaining site security.



### Future Activities

DEQ will maintain necessary site obligations including waste water treatment of LP1, weed mitigation and oversight of the EPA, US Forest Service and DEQ superfund remediation and mine reclamation activities until repository closure. DEQ, EPA and the Forest Service will conduct reclamation of the mine site. EPA will install a permanent cover over Luttrell Repository in 2014 or 2015. Ten years after Luttrell Repository is determined to be operational and functional, DEQ will have Operations and Management responsibilities of Luttrell Repository in perpetuity.

If you have questions, please contact:

Joel Chavez  
DEQ - Remediation Division  
P.O. Box 200901  
Helena, MT 59620-0901  
[jchavez@mt.gov](mailto:jchavez@mt.gov)  
406-841-5031

**More Information about the Facility can be found at:**

Montana Department of Environmental Quality  
1100 North Last Chance Gulch  
Helena, MT 59601  
Monday – Friday: 8 a.m. – 5 p.m.



**Department of Environmental Quality  
Remediation Division  
DP4005 – Beal and Basin Reclamation Bond Expenditure**

**BEAL MOUNTAIN MINE**



**ABANDONED MINE PROGRAM**

**Update**

January 2013

**Description and History**

The Beal Mountain Mine is located in the headwaters of German Gulch in the Pioneer Mountains, Silver Bow County, Montana, about 16 miles west southwest of Butte and 10 miles southwest of Fairmont (Gregson) Hot Springs. The mine is primarily situated on land managed or controlled by the United States Department of Agriculture, Forest Service (USDA-FS). The Beal Mountain Mine completed open pit mining operations in 1997 and gold recovery from the heap leach pad in 1999, with reclamation of the mine disturbances continuing through 2004 and active treatment of heap leach solution with land application operations continuing through 2005. Pegasus Gold Inc, filed for bankruptcy in 1998 and a trustee was appointed by the court who was responsible for implementing reclamation at the site. In 1999, the leach pad solutions containing cyanide and dissolved metals overtopped the containment dyke and emergency water treatment operations were implemented. Water treatment exhausted the reclamation bond funds. With the exhaustion of reclamation bond funds, the State of Montana issued \$2.5 million in Hard Rock Mining Reclamation Bonds (82-4-314 MCA) to cover the costs of treating and disposing of the leach pad solutions. With bond funds depleted, the USDA-FS became the lead agency responsible for final mine closure. After exhaustion of the reclamation bond monies by the bankruptcy trustee, the tax forfeiture parcels were deeded to the USDA-FS, and the water treatment plant facilities were deeded to the Montana Department of Environmental Quality (DEQ). DEQ continues to work with the USDA-FS under Cooperative Agreements to share closure activities at the Beal Mountain Mine.

**Photo of the Main Beal Pit, Beal Mountain Mine**

In March 2010, the USDA-FS completed a Final Engineering Evaluation/Cost Analysis (EE/CA) that identifies and evaluates final





closure options for the Beal Mountain Mine. The EE/CA for the Beal Mountain Mine presents alternatives to address issues at the mine that constitute the release or threat of release of contaminants present at the site. The preferred alternatives identified for the multiple facilities and areas at the Beal Mountain Mine total \$39,530,139, not accounting for on-going water treatment costs.

The goal for the Beal Mountain Mine is to close the mine and allow the area to be used for multiple purposes. Several on-going operational, maintenance, and reclamation requirements must be met for specific facilities before final closure. Outstanding issues such as long-term geochemical reactivity of mine wastes (both acidity and release of selenium to the environment from several potential mine sources), geotechnical stability of the pit highwall and leach pad dike, infiltration of precipitation into the leach pad, and treatment and disposal of remaining heap leach solution need to be addressed.

### **Recent Activities Through 2012**

DEQ has taken incremental actions toward achieving the goal of returning the mine to pre-mining multiple use status. In 2010 and 2011, DEQ used Montana Department of Natural Resources and Conservation Reclamation and Development Grant (RDG) funds that were awarded by the 2009 legislature to apply cover soil to the upper waste rock dump and constructed a surface water diversion channel that would divert surface water away from the waste rock pile, respectively. This work was neglected when reclamation bond resources were directed towards leach pad water treatment and away from vegetative cover treatments. In 2012, DEQ used RDG funds that were awarded by the 2011 legislature to remove and reclaimed three pond facilities to pre-mining topography and construct a surface water diversion channel above the Main Beal Pit that would divert water away from the pit and reduce infiltration into a geotechnical unstable area in the pit highwall.

### **Future Activities**

In 2013, DEQ plans to use approximately \$10,000 of remaining RDG funds to install temporary fences around the reclaimed pond areas to keep out cattle and allow the vegetation to establish. DEQ also plans to use approximately \$90,000 of remaining RDG funds towards improvements and maintenance for the Montana Pollutant Discharge Elimination System (MPDES system) at Beal Mountain Mine. This system diverts waters generated from several springs and waste rock dump away from German Gulch Creek. This project will be a joint project between DEQ and the USDA-FS.

DEQ submitted a RDG proposal in 2012 requesting funds to remove and reclaim the Barren Pond and remove foundations, footings, and other inert material that remain at the site as a result of several structures that removed at sold at auction by DEQ in 2008. This RDG proposal is currently being evaluated by the 2013 legislature. Implementation of this project is dependent on approval of RDG funding by the 2013 legislature.

<p>If you have questions, please contact:</p> <p>Pebbles Opp DEQ - Remediation Division P.O. Box 200901 Helena, MT 59620-0901 <a href="mailto:popp@mt.gov">popp@mt.gov</a> 406-841-5028</p>	<p><b>More Information about the Facility can be found at:</b></p> <p>Montana Department of Environmental Quality 1100 North Last Chance Gulch Helena, MT 59601 Monday – Friday: 8 a.m – 5 p.m. <a href="http://deq.mt.gov/StateSuperfund/index.asp">http://deq.mt.gov/StateSuperfund/index.asp</a></p>
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